

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
2015 Gold King Mine Release SITREP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 8



**Subject:** SITREP #3  
Gold King Mine Release  
  
**San Juan County, Colorado**  
**Latitude: 37.8945 Longitude: -107.6384**  
  
**From:** R8 IMT Situation Unit  
**Date:** 08/11/2015  
**Reporting Period:** 08/08/15 through 08/11/15  
**Website:** [epa.gov/goldkingmine](http://epa.gov/goldkingmine)

## Executive Summary

On August 5, while investigating the Gold King Mine in Colorado, an EPA cleanup team triggered a release of mine wastewater into Cement Creek. The EPA is working closely with responders and local, state and tribal officials to monitor water contaminated by the release. The release's path flows through three of the EPA's regions (Region 8 (Colorado/Utah & Southern Ute Tribe, and Ute Mountain Ute Tribe); Region 6 (New Mexico), and Region 9 (Navajo Nation). EPA has activated its Emergency Operations System to ensure coordination among its regions, laboratories and national program offices in Washington, D.C. The EPA has also set up an incident command center in Durango, CO. The EPA is closely coordinating with officials in Colorado, New Mexico, Utah, Southern Ute Tribe and Navajo Nation.

### 1. Introduction

#### 1.1 Background

<b>Site Number:</b> A8K9RV	<b>Contract Number:</b>
<b>D.O. Number:</b>	<b>Action Memo Date:</b>
<b>Response Authority:</b> CERCLA	<b>Response Type:</b> Emergency
<b>Response Lead:</b> EPA	<b>Incident Category:</b>
<b>NPL Status:</b> not listed	<b>Operable Unit:</b>
<b>Mobilization Date:</b> 08/05/2015	<b>Start Date:</b> 08/05/15
<b>Demob Date:</b> TBD	<b>Completion Date:</b>
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b> 08/05/15

The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice. Furthermore, all such watercraft must be removed from the Animas River within the locations cited above. The decision was made after consultation with the EPA, CDPHE, the San Juan Basin Health Department, and representatives of the Southern Ute Indian Tribe. The Order will remain in effect until it is determined that the river is safe

##### 1.1.1 Incident Category

##### 1.1.2 Site Description.

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

The EPA Region 8 have been investigating the conditions to assess the on-going releases and incremental de-watering and removal of blockages to prevent blowouts.

**1.1.2.1 Location** - San Juan County, Colorado, La Plata County, Colorado, Southern Ute Indian Reservation and Ute Mountain Ute Tribe reservation.

**1.1.2.2 Description of Threat**

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gaging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The City of Durango relies on the Animas River as one of its main water sources - the Animas source is off-line. The river is also used for recreational purposes, including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release passed through Durango, Colorado, on Friday, August 7, 2015, and on August 8, 2015, it crossed the border into New Mexico where it eventually discharged into the San Juan River.

**1.1.3 Site Inspection Results**

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

The EPA is collecting and assessing water quality from the Animas and San Juan Rivers daily. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

**1.2 Incident Objectives**

- Maintain safety of responders.
- Establish and staff for tracking calls about wells.
- Develop sampling plan and strategy to mitigate risks with the river.
- Sample wells as needed, communicate results to owners.
- Continue river assessment.
- Continue management of adit discharge including treating water prior to discharge to Cement Creek.
- Develop livestock and wild life fact sheets.
- Develop firefighting water contingency plan.
- Protect the drinking water supply of the City of Durango, Colorado, and others who may be using the river for various purposes.
- Effectively communicate with public and stakeholders; develop communication strategy for community dissemination of results to public and stakeholders.
- Implement risk strategy assessment.
- Develop messaging for economic impact upon public and stakeholders.
- Continue to provide potable water for impacted residents and livestock operations.
- Develop a strategy to address the irrigation ditches.

### **1.3 Critical Resource Needs**

No information available at this time.

### **1.4 Strategic Considerations**

No information available at this time.

## **2. Current Activities**

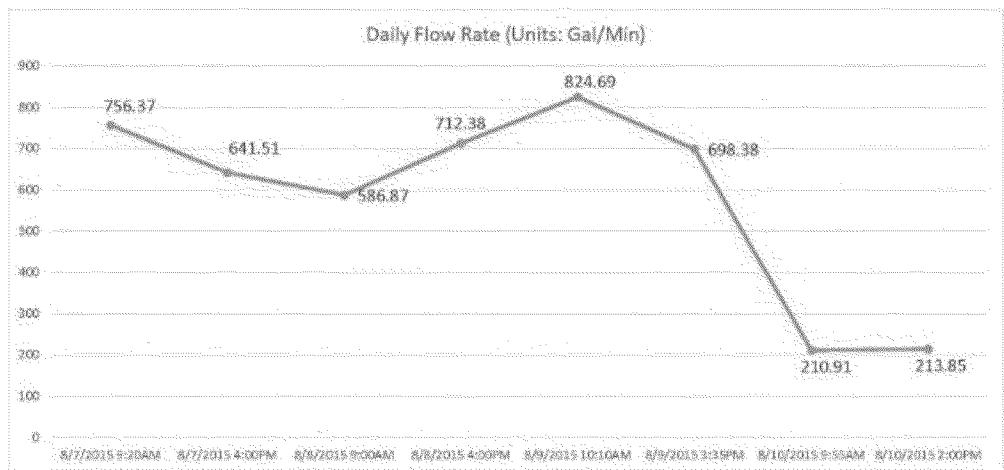
### **2.1 Operations Section**

#### **2.1.1 Response Actions to Date**

A Unified Command (UC) post in Durango was established on 8/7/2015 and expanded on 8/10/2015 to full staff levels. An Area Command was also moved to Durango on 8/10/15. The UC includes EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, San Juan Basin Health Department. The Ute Mountain Ute Tribe will likely join during the next operational period. The EPA Regions 6 and 9 have established incident command posts in Farmington, New Mexico that cover New Mexico and the Navajo Nation response areas.

The EPA initiated a water quality sampling effort on August 5, 2015, to assess the impacts of the release at the Gold King Mine. There were a total of 5 sampling teams deployed on Monday, 8/10/2015, three from the EPA Region 8 and two from Colorado Department of Health and the Environment (CDPHE). There were four river and 30-40 well water samples collected August 10, 2015. The EPA collected surface water quality samples from seven locations; two of these locations were on Cement Creek, and five of these were on the Animas River in Colorado. Well samples were also collected. These locations were selected based on the availability of an historical dataset for these locations. These analysis of these samples include pH, dissolved concentrations of metals, and operational milestones. The CDPHE collected samples from raw and finished drinking water supplies and water samples from the northern segment of the Animas River.

The EPA continues to operate four treatment and sedimentation ponds at the mine site and which are treating water by lowering acidity levels and removing dissolved metals. Flow from the mine Tuesday morning is shown in the following chart.



Treated water from the last treatment pond is discharging into Cement Creek at levels cleaner (higher pH and lower levels of metals) than pre-event, background conditions in the creek. Over the next several days, the EPA will make upgrades to the system to ensure its continued operation.

ASPECT aerial flyovers and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

Colorado Parks & Wildlife officials have been monitoring the effects of the spill on terrestrial & aquatic wildlife since the incident began. To date we have seen no indication of widespread fish mortality in the Animas or San Juan. Fish cages placed directly in the Animas River by the State of Colorado Division of Parks and Wildlife for two days indicate one mortality out of 108 fish tested.

The EPA Region 8 uploaded data and a data summary to EPA's Gold King Mine Release OSC website.

### 2.2.1 Anticipated Activities

There will be seven sample teams, five from the EPA and two one-person teams from CDPHE. Sampling of the seven data points on the river will continue in addition to conducting sediment sampling and well sampling. CDPHE is taking raw and finished drinking water samples, samples from the northern section of the Animas River, and sediment samples.

Sampling procedures and a sampling plan are being established and shared with all relevant parties to ensure consistency.

The EPA Region 8 is distributing bottled water to citizens, and both potable and non-potable water for livestock and other agricultural purposes, as needed.

The EPA Region 8 is coordinating with Agency for Toxic Substances and Disease Registry

(ATSDR) in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado. Public health questions should be directed to Chris Poulet, ATSDR.

#### **2.2.1.2 Next Steps**

#### **2.2.2 Issues**

#### **2.3 Logistics Section**

The UC was moved to the County fairgrounds the evening of 8/10/2015.

#### **2.4 Finance Section**

##### **2.4.1 Narrative**

The UC in Durango includes Finance section personnel and this will be updated in the next report.

#### **2.5 Other Command Staff**

##### **2.5.1 Safety Officer**

##### **2.5.2 Liaison Officer**

The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area.

The EPA Region 8 has contacted the US Fish and Wildlife Service and the US Department of Interior about the incident, and is working with the US Geological Service on water flow data in Cement Creek and the Animas River.

##### **2.5.3 Information Officer**

A last press release done on August 10, 2015.

##### **2.5.4 Weather Forecast**

Weather forecast for Tuesday, August 11, 2015:

###### Today

Showers likely and possibly a thunderstorm before 9am, then scattered showers and thunderstorms after 9am. Some of the storms could produce heavy rainfall. Cloudy, with a high near 80. North wind 5 to 10 mph becoming south in the afternoon. Winds could gust as high as 20 mph. Chance of precipitation is 60%.

###### Tonight

A 50 percent chance of showers and thunderstorms, mainly before 4am. Some of the storms could produce heavy rainfall. Mostly cloudy, with a low around 55. South southeast wind 5 to 10 mph becoming north northeast after midnight.

###### Wednesday

A 20 percent chance of showers and thunderstorms. Mostly sunny, with a high near 82. North northeast wind 5 to 10 mph becoming southwest in the morning.

### **3. Participating Entities**

#### **3.1 Area Command**

The EPA Region 8 is coordinating with the EPA Regions 6 and 9, the states of Colorado and Utah, the Southern Ute Tribe and the Ute Mountain Ute Tribe. The EPA Region 6 is working closely with the New Mexico Environment Department (NMED) to evaluate possible impacts in Mexico. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and NMED are providing assistance to community water systems and closely monitoring the situation.

The EPA Region 9 has contacted the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation.

#### **3.2 Unified Command and Cooperating Agencies**

The UC includes EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, San Juan Basin Health Department. The Ute Mountain Ute Tribe will likely join during the next operational period.

The CDPHE is collecting samples as noted above.

### **4. Personnel On Site**

There was a number of the EPA personnel reported to the site on Monday, 9/10/2015.

<b>Gold King Mine Release 2015</b>	
	08/09/2015
<b>Group</b>	<b>Number</b>
EPA @ REOC	11
Contractors @ REOC	2
EPA in Field (R8)	24
Contractors in Field (R8)	17
WERT Reg 8	0

**5. Definition of Terms** - No information available at this time.

**6. Additional sources of information** – [epa.gov/goldkingmine](http://epa.gov/goldkingmine)

**7. Situational Reference Materials** -